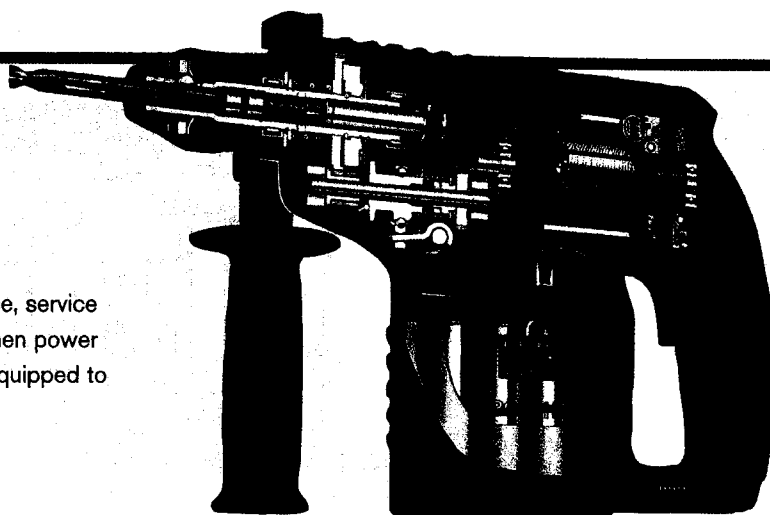


# CORDLESS ROTARY HAMMERS

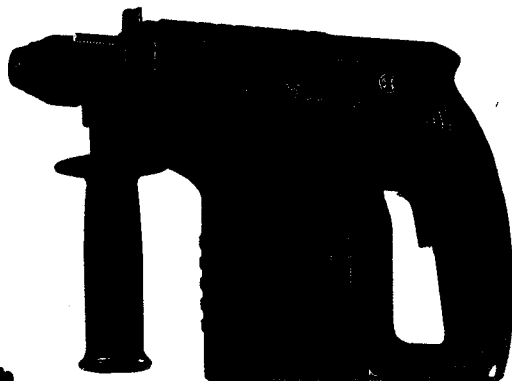
## Professional Drilling Speed and Longer Run Time

The perfect cordless rotary hammer for maintenance, service trucks and remote power supplies. A must have when power is unavailable or hard to get. The 11225VSRH is equipped to drill up to 155\* holes in concrete.



**11225VSR**  
**3/4" SDS-plus® Cordless Rotary Hammer**

**THE ANNIHILATOR™**



Carrying Case  
Included

### Features

- 24 volts, 1.7 A-h battery
- Run time approx. 90 holes on 1 charge (1/4" dia. x 1-1/2" deep into average strength concrete). 15 minute recharge
- SDS-plus® bit system - tool-free bit changes with automatic locking, dust protection and maximum impact energy transfer rate
- Variable-speed reversing trigger - for accurate bit starting, as well as removing fasteners or bound bits
- Dual mode selector - 2 modes of operation, rotation only and rotary hammer mode
- Pistol grip handle - compact ergonomic design
- 360° Auxiliary handle with built-in depth gauge - wide range of movement along with consistent drilling depth
- Integral clutch - helps minimize torque reaction
- UL listed, complies to OSHA

### Specifications

Rating	24V DC
Battery Capacity	1.7 A-h
No Load RPM	0-1,200
Loaded BPM	0-4,400
Impact Energy	1.0 ft. lbs.
Maximum Capacities (in.)	
Concrete	3/4
Steel	1/2
Wood	3/4
Length (in.)	13
Weight (lbs.)	7.7

### Standard Equipment

Battery	BAT019
Charger	BC015
Auxiliary Handle	1 612 025 032
Depth Gauge	1 613 001 010
Carrying Case	2 605 438 358

### Optional Equipment

Charger Adapter	2 607 000 198
-----------------	---------------



**11225VSRH**  
**3/4" SDS-plus® Cordless Rotary Hammer**

**THE ANNIHILATOR™**



Carrying Case  
Included

### Features

- 24 volts, 3 A-h battery
- Extended run time - approx. 155 holes on 1 charge (1/4" dia. x 1-1/2" deep into average strength concrete). 26 minute recharge
- SDS-plus® bit system - tool-free bit changes with automatic locking, dust protection and maximum impact energy transfer rate
- Variable-speed reversing trigger - for accurate bit starting, as well as removing fasteners or bound bits
- Dual mode selector - 2 modes of operation, rotation only and rotary hammer mode
- Advanced charger - guarantees full charges and extends battery life
- Battery level gauge - displays 5 stages of charge levels; illuminates with tool on or off
- Pistol grip handle - compact ergonomic design
- 360° Auxiliary handle with built-in depth gauge - wide range of movement along with consistent drilling depth
- Integral clutch - helps minimize torque reaction
- UL listed, complies to OSHA

### Specifications

Rating	24V DC
Battery Capacity	3.0 A-h
No Load RPM	0-1,200
Loaded BPM	0-4,400
Impact Energy	1.0 ft. lbs.
Maximum Capacities (in.)	
Concrete	3/4
Steel	1/2
Wood	3/4
Length (in.)	13
Weight (lbs.)	9.2

### Standard Equipment

Battery	BAT021
Charger	BC015
Auxiliary Handle	1 612 025 032
Depth Gauge	1 613 001 010
Carrying Case	2 605 438 358

### Optional Equipment

Charger Adapter	2 607 000 198
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SDS-plus® is a registered trademark of Robert Bosch GmbH.

\*Approximately 155 holes on 1 charge (1/4" diameter a 1-1/2" deep into average strength concrete).

**IMPORTANT:**  
Read Before Using

**IMPORTANT :**  
Lire avant usage

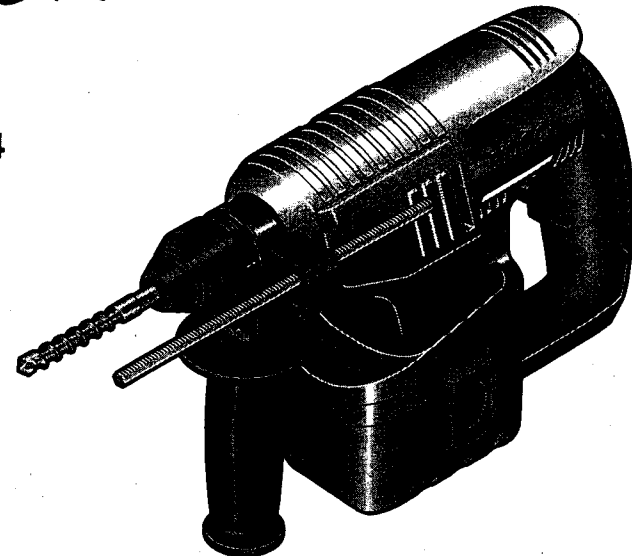
**IMPORTANTE:**  
Leer antes de usar



**Operating/Safety Instructions**  
**Consignes de fonctionnement/sécurité**  
**Instrucciones de funcionamiento**  
**y seguridad**

**ITEM #12**

**11524**



**S/N DIS01-01**

**BOSCH**

**10-29-03**

**Consumer Information**  
**Renseignement des consommateurs**  
**Información para el consumidor**

**Toll Free Number:**      **Appel gratuit :**      **Número de teléfono gratuito:**  
**1-877-BOSCH99 (1-877-267-2499) <http://www.boschtools.com>.**

**For English**  
**See page 2**

**Parlez-vous français?**  
**Voir page 14**

**¿Habla español?**  
**Ver página 26**

**WARNING**

Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

**SAVE THESE INSTRUCTIONS****Work Area**

Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.

Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks which may ignite the dust or fumes.

Keep by-standers, children, and visitors away while operating a power tool. Distractions can cause you to lose control.

**Electrical Safety**

Do not abuse the cord. Never use the cord to carry the tool. Keep cord away from heat, oil, sharp edges, or moving parts. Replace damaged cords immediately. Damaged cords may create a fire.

A battery operated tool with integral batteries or a separate battery pack must be recharged only with the specified charger for the battery. A charger that may be suitable for one type of battery may create a risk of fire when used with another battery.

Use battery operated tool only with specifically designated battery pack. Use of any other batteries may create a risk of fire.

**Personal Safety**

Stay alert, watch what you are doing, and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.

Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.

Avoid accidental starting. Be sure switch is in the locked or off position before inserting battery pack. Carrying tools with your finger on the switch or inserting the battery pack into a tool with the switch on invites accidents.

Remove adjusting keys or wrenches before turning the tool on. A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enable better control of the tool in unexpected situations.

Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

**Tool Use and Care**

Use clamps or other practical way to secure and support the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.

Do not force tool. Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.

Do not use tool if switch does not turn it on or off. A tool that cannot be controlled with the switch is dangerous and must be repaired.

Disconnect battery pack from tool or place the switch in the locked or off position before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.

Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.

When battery pack is not in use, keep it away from other metal objects like: paper

clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another. Shorting the battery terminals together may cause sparks, burns, or a fire.

Maintain tools with care. Keep cutting tools sharp and clean. Properly maintained tools with sharp cutting edge are less likely to bind and are easier to control.

Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.

Use only accessories that are recom-

mended by the manufacturer for your model. Accessories that may be suitable for one tool may create a risk of injury when used on another tool.

**Service**

Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel may result in a risk of injury.

When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual. Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of shock or injury.

**Cordless Rotary Hammer Safety Rules**

Hold tool by insulated gripping surfaces when performing an operation where the cutting tools may contact hidden wiring or its own cord. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator. Do not drill, fasten or break into existing walls or other blind areas where electrical wiring may exist. If this situation is unavoidable, disconnect all fuses or circuit breakers feeding this worksite.

Wear ear protectors when using the tool for extended periods. Prolonged exposure to high intensity noise can cause hearing loss.

Always use auxiliary handle for maximum control over torque reaction or kick-back. High torque 3/8" and larger chuck capacity drills are equipped with auxiliary handles.

Always wear safety goggles or eye protection when using this tool. Use a dust mask or respirator for applications which generate dust.

Use thick cushioned gloves and limit the exposure time by taking frequent rest periods. Vibration caused by hammer-drill action may be harmful to your hands and arms.

Secure the material being drilled. Never hold it in your hand or across legs.

Unstable support can cause the drill bit to bind causing loss of control and injury.

Disconnect battery pack from tool or place the switch in the locked or off position before making any assembly, adjustments or changing accessories. Such preventive safety measures reduce the risk of starting the tool accidentally.

Position yourself to avoid being caught between the tool or side handle and walls or posts. Should the bit become bound or jammed in the work, the reaction torque of the tool could crush your hand or leg.

If the bit becomes bound in the workpiece, release the trigger immediately, reverse the direction of rotation and slowly squeeze the trigger to back out the bit. Be ready for a strong reaction torque. The drill body will tend to twist in the opposite direction as the drill bit is rotating.

Do not grasp the tool or place your hands too close to the spinning chuck or drill bit. Your hand may be lacerated.

When installing a drill bit, insert the shank of the bit well within the jaws of the chuck. If the bit is not inserted deep enough, the grip of the jaws over the bit is reduced and the loss of control is increased.

**Do not use dull or damaged bits and accessories.** Dull or damaged bits have a greater tendency to bind in the workpiece.

**When removing the bit from the tool avoid contact with skin and use proper protective gloves when grasping the bit or accessory.** Accessories may be hot after prolonged use.

**Check to see that keys and adjusting wrenches are removed from the drill before switching the tool "ON".** Keys or wrenches can fly away at high velocity striking you or a bystander.

**Do not run the tool while carrying it at your side.** A spinning drill bit could become entangled with clothing and injury may result.

### Battery/Charger

**Before using battery charger, read all instructions and cautionary markings on (1) battery charger, (2) battery pack, and (3) product using battery.**

**Use only the charger which accompanied your product or direct replacement as listed in the catalog or this manual.** Do not substitute any other charger. Use only Bosch approved chargers with your product. See Functional Description and Specifications.

**Do not disassemble charger or operate the charger if it has received a sharp blow, been dropped or otherwise damaged in any way. Replace damaged cord or plugs immediately.** Incorrect reassembly or damage may result in electric shock or fire.

**Do not recharge battery in damp or wet environment. Do not expose charger to rain or snow. If battery case is cracked or otherwise damaged, do not insert into charger.** Battery short or fire may result.

**Charge only Bosch approved rechargeable batteries.** See Functional Description and Specifications. Other types of batteries may burst causing personal injury and damage.

**Charge battery pack in temperatures above +40 degrees F (4 degrees C) and below +105 degrees F (41 degrees C). Store tool and battery pack in locations**

**⚠ WARNING** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints,
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

**where temperatures will not exceed 120 degrees F (49 degrees C).** This is important to prevent serious damage to the battery cells.

**Battery leakage may occur under extreme usage or temperature conditions. Avoid contact with skin and eyes.** The battery liquid is caustic and could cause chemical burns to tissues. If liquid comes in contact with skin, wash quickly with soap and water, then with lemon juice or vinegar. If the liquid contacts your eyes, flush them with water for a minimum of 10 minutes and seek medical attention.

**Place charger on flat non-flammable surfaces and away from flammable materials when re-charging battery pack.** The charger and battery pack heat during charging. Carpeting and other heat insulating surfaces block proper air circulation which may cause overheating of the charger and battery pack. If smoke or melting of the case are observed unplug the charger immediately and do not use the battery pack or charger.

**Use of an attachment not recommended or sold by Bosch may result in a risk of fire, electric shock or injury to persons.**

### Battery Care

**⚠ WARNING** When batteries are not in tool or charger, keep them away from metal objects. For example, to protect terminals from shorting **DO NOT** place batteries in a tool box or pocket with nails, screws, keys, etc. Fire or injury may result.

**⚠ WARNING** To prevent fire or injury when batteries are not in tool or charger, always place protective cap onto end of battery pack. Protective cap, guards against terminal shorting.

**DO NOT PUT BATTERIES INTO FIRE OR EXPOSE TO HIGH HEAT.** They may explode.

### Battery Disposal

**⚠ WARNING** Do not attempt to disassemble the battery or remove any component projecting from the battery terminals. Fire or injury may result. Prior to disposal, protect exposed terminals with heavy insulating tape to prevent shorting.

#### NICKEL-CADMIUM BATTERIES

If equipped with a nickel-cadmium battery, the battery must be collected, recycled or disposed of in an environmentally sound manner.



"The EPA certified RBRC Battery Recycling Seal on the nickel-cadmium (Ni-Cd) battery indicates S-B Power Tool Company is voluntarily participating in an industry program to collect and recycle these batteries at the end of their useful life, when

taken out of service in the United States or Canada. The RBRC program provides a convenient alternative to placing used Ni-Cd batteries into the trash or the municipal waste stream, which may be illegal in your area.

Please call 1-800-8-BATTERY for information on Ni-Cd battery recycling and disposal bans/restrictions in your area, or return your batteries to a Skil/Bosch/Dremel Service Center for recycling. S-B Power Tool Company's involvement in this program is part of our commitment to preserving our environment and conserving our natural resources."

#### NICKEL-METAL HYDRIDE BATTERIES

If equipped with a nickel-metal hydride battery, the battery can be disposed of in a municipal solid waste stream.

**IMPORTANT:** Some of the following symbols may be used on your tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and safer.

Symbol	Name	Designation/Explanation
V	Volts	Voltage (potential)
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
kg	Kilograms	Weight
min	Minutes	Time
s	Seconds	Time
Ø	Diameter	Size of drill bits, grinding wheels, etc.
n <sub>0</sub>	No load speed	Rotational speed, at no load
.../min	Revolutions or reciprocation per minute	Revolutions, strokes, surface speed, orbits etc. per minute
0	Off position	Zero speed, zero torque...
1, 2, 3, ... I, II, III,	Selector settings	Speed, torque or position settings. Higher number means greater speed
0	Infinitely variable selector with off	Speed is increasing from 0 setting
	Arrow	Action in the direction of arrow
	Alternating current	Type or a characteristic of current
	Direct current	Type or a characteristic of current
	Alternating or direct current	Type or a characteristic of current
	Class II construction	Designates Double Insulated Construction tools.
	Earthing terminal	Grounding terminal
	Warning symbol	Alerts user to warning messages
	Ni-Cad RBRC seal	Designates Ni-Cad battery recycling program

This symbol designates that this tool is listed by Underwriters Laboratories.

This symbol designates that this tool is listed to Canadian Standards by Underwriters Laboratories.

This symbol designates that this tool is listed by the Canadian Standards Association.

This symbol designates that this tool is listed by Underwriters Laboratories, and listed to Canadian Standards by Underwriters Laboratories.

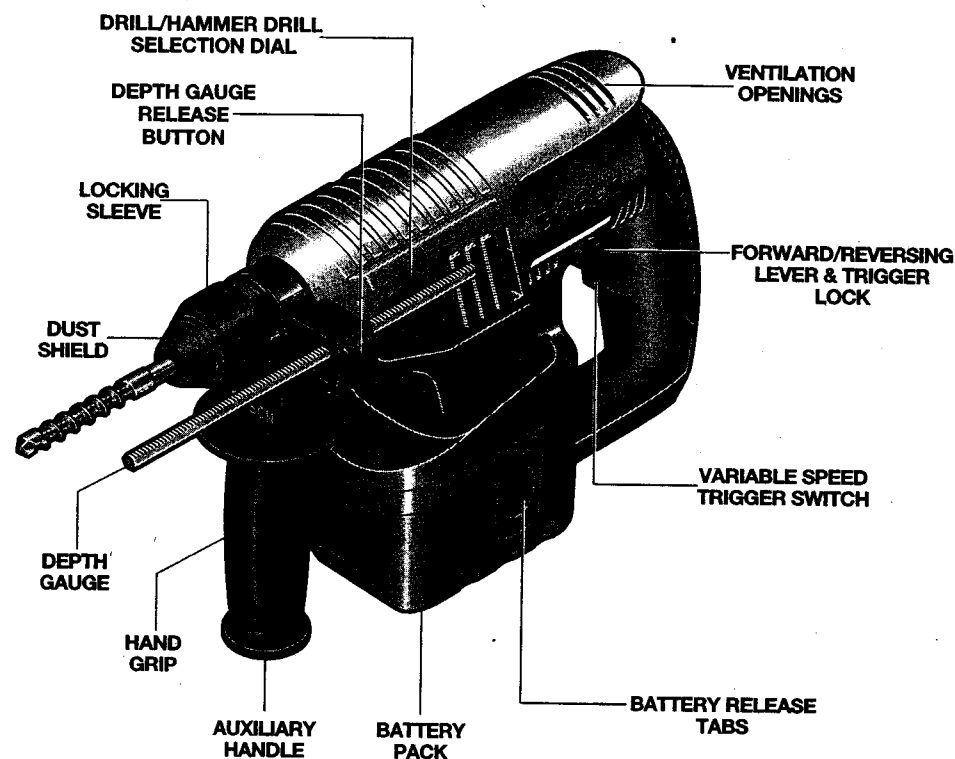
**NOM-ANCE**

This symbol designates that this tool complies to NOM Mexican Standards.

**⚠ WARNING** Disconnect battery pack from tool or place the switch in the locked or off position before making any assembly, adjustments or changing accessories. Such preventive safety measures reduce the risk of starting the tool accidentally.

## Cordless Rotary Hammer

FIG. 1



### Tool

Model Number 11524  
Voltage rating 24 V   
Shank style SDS  
Charge time 15 min.

### Charger

BC004, BC006, BC015  
& BC016

Battery pack BAT031  
Voltage rating 120 V 60 Hz

### Maximum Capacities:

Material	
Concrete	3/4"
Steel	1/2"
Wood	3/4"

BC006 charger requires 12 V DC input

**NOTE: ONLY USE CHARGERS LISTED ABOVE**

**NOTE:** For tool specifications refer to the nameplate on your tool.

### VARIABLE SPEED CONTROLLED TRIGGER SWITCH

Your tool is equipped with a variable speed trigger switch. The tool speed can be controlled from the minimum to the maximum nameplate RPM by the pressure you apply to the trigger. Apply more pressure to increase the speed and release

pressure to decrease speed. This accurate speed control enables you to drill without center punching. It also permits you to use as a power screwdriver. Bits are available for driving screws as well as running bolts and nuts.

### FORWARD/REVERSING LEVER & TRIGGER LOCK

Your tool is equipped with a forward/reversing lever and trigger lock located above the trigger (Fig. 1). This lever was designed for changing rotation of the chuck, and for locking the trigger in an "OFF" position to help prevent accidental starts and accidental battery discharge. For forward rotation, (with chuck pointed away from you) move the lever to the far left. For

reverse rotation move the lever to the far right. To activate trigger lock move lever to the center off position.

**CAUTION** Do not change direction of rotation until the tool comes to a complete stop. Shifting during rotation of the chuck can cause damage to the tool.

### SLIP CLUTCH

The tool has an internal preset clutch. The clutch is set such that sufficient force is transmitted to the bit for most drilling conditions but it will slip when bit binds in the hole or the tool is overloaded. Be aware that due to required clutch setting, you may experience a torque reaction an instant before the clutch slips. This torque reaction will twist the body of the rotohammer in the opposite direction as the bit rotates, i.e.,

counterclockwise. As clutch is slipping, the bit will most likely stop rotating. When the binding force on the bit is removed the clutch automatically resets. If you experience bit binding and clutch begins to slip, immediately turn the tool "OFF" and correct the condition leading to the bit binding.

### AUXILIARY HANDLE

The tool must be supported with the auxiliary handle, which can be swiveled 360°. To reposition and/or swivel the handle, loosen the hand grip, move the handle to the desired position along the barrel and securely retighten the hand grip.

### DEPTH GAUGE

Your drilling depth can be pre-set and/or repeated by using the depth gauge.

Setting depth: After the auxiliary handle is installed, push the depth gauge release button, slide the depth gauge to desired depth and release pressure on button to lock the depth gauge in place.

### BRAKE

When the trigger is released it activates the electrical brake to stop the chuck quickly. This is especially useful in the repetitive driving and removal of screws.

### DRILL/HAMMER DRILL SELECTION DIAL

The selector dial allows the tool to be set for various drilling applications. Shift the dial right or left depending on the below applications.

**CAUTION** Do not operate the selection dial until the tool comes to a complete stop. Shifting during rotation of the chuck can cause damage to the tool.

Do not use demolition or chipping bits such as bull points, chisels, spades, gouges, etc.



**Drill only action:** For drilling in woods, metals, plastics or other non concrete materials.



**Drill with hammer action:** For drilling in concrete, asphalt, tile or other similar hard materials.

### INSTALLING ACCESSORIES

**WARNING** Disconnect battery pack from tool or place the switch in the locked or off position before making any assembly, adjustments or changing accessories. Such preventive safety measures reduce the risk of starting the tool accidentally.

Clean the insert shank end of the accessory to remove any debris, then lightly grease with a light oil or lubricant.

Insert accessory into the tool holder through the dust shield, while twisting and pushing inward until it locks automatically into place. Pull outward on the accessory to be certain it is locked into the tool holder (Fig. 2).

FIG. 2



**NOTE:** The high efficiency available from the rotary hammers can only be obtained if

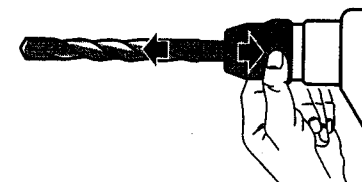
sharp and undamaged accessories are used. The "cost" to maintain sharp and undamaged accessories is more than offset by the "time saved" in operating the tool with sharp accessories.

### REMOVING ACCESSORIES

**WARNING** When removing the bit from the tool avoid contact with skin and use proper protective gloves when grasping the bit or accessory. Accessories may be hot after prolonged use.

To remove an accessory, pull the locking sleeve backwards (towards the rear of tool), while pulling the accessory outward. All accessories should be wiped clean after removing (Fig. 3).

FIG. 3



### RELEASING AND INSERTING BATTERY PACK

Release battery pack from tool by pressing on both sides of the battery release tabs and pull downwards. Before inserting battery pack, remove protective cap from battery pack. To insert battery, align battery and slide battery pack into tool until it locks into position. Do not force.

Your battery pack is equipped with a

secondary locking latches to prevent the battery pack from completely falling out of the handle, should it become loose due to vibration.

If any of the locking latches are broken (Fig. 4 & 5). Return your tool to the nearest Authorized Service Center to be repaired or replaced

FIG. 4

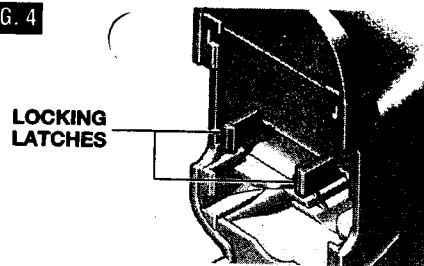
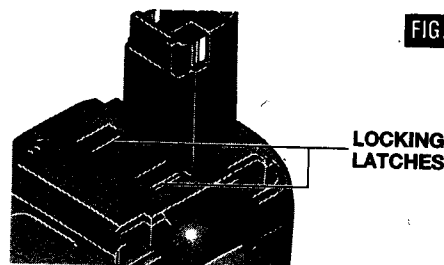


FIG. 5



### CHARGING BATTERY PACK

Plug charger cord into your standard power outlet. Before inserting battery pack, remove protective cap (Fig. 6), then insert battery pack into charger (Fig. 7).

The charger's green indicator light will begin to "BLINK". This indicates that the battery is receiving a fast charge. Fast-charging will automatically stop when the battery pack is fully charged.

When the indicator light stops "BLINKING" (and becomes a steady green light) fast charging is complete, and an acoustical signal sounds for a period of approximately 2 seconds which indicates that the battery is completely charged.

The battery pack may be used even though the light may still be blinking. The light may require more time to stop blinking depending on temperature.

The purpose of the green light is to indicate that the battery pack is fast-charging. It does not indicate the exact point of full charge. The light will stop blinking in less time if the battery pack was not completely discharged.

When charging several batteries in sequence, the charge time may slightly increase.

When the battery pack is fully charged, unplug the charger (unless you're charging another battery pack) and slip the battery pack back into the tool.

To prevent fire or injury when batteries are not in tool or charger, always place protective cap onto end of battery pack (Fig. 6).

FIG. 6

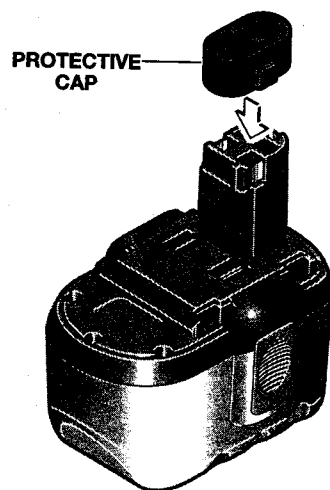
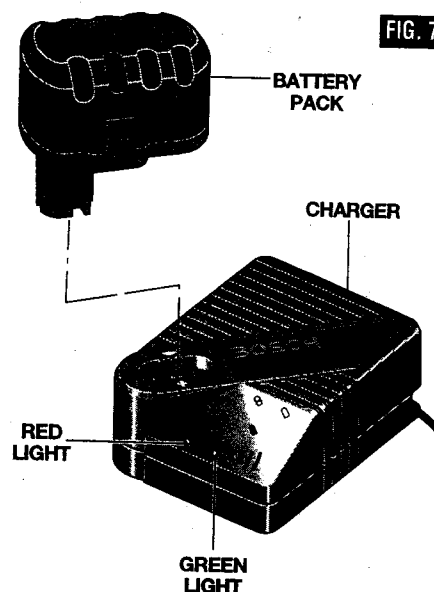





FIG. 7





### INDICATORS, SYMBOLS AND MEANING

 If the indicator lights are "OFF", the charger is not receiving power from power supply outlet.

 If the green indicator light is "ON", the charger is plugged in but the battery pack is not inserted, or the battery pack is fully charged and is being trickle charged.

 If the green indicator light is "BLINKING", the battery pack is being fast-charged. Fast-charging will automatically stop when the battery pack is fully charged.

 If the red indicator light is "ON", the battery pack is too hot or cold for fast-charging. The charger will switch to trickle charge, until a suitable temperature is reached, at which time the charger will switch automatically to fast-charging.

 If the red indicator light is "BLINKING", an acoustical signal will sound for a period of 2 seconds which indicates the battery pack cannot accept a charge or the contacts of the charger or battery pack are contaminated. Clean the contacts of the charger or battery pack only as directed in these operating instructions or those supplied with your tool or battery pack.

### IMPORTANT CHARGING NOTES

1. The battery pack accepts only about 80% of its maximum capacity with its first few charge cycles. However, after the first few charge cycles, the battery will charge to full capacity.

2. The charger was designed to fast charge the battery only when the battery temperature is between 32°F (0°C) and 140°F (60°C). If the battery pack is too hot or too cold, the charger will not fast charge the battery. (This may happen if the battery pack is hot from heavy use). When the battery temperature returns to between 32°F (0°C) and 140°F (60°C), the charger will automatically begin charging.

3. A substantial drop in operating time per charge may mean that the battery pack is nearing the end of its life and should be replaced.

4. If you anticipate long periods (i.e. a month or more) of non-use of your tool, it is best to run your tool down until it is fully discharged before storing your battery pack. After a long

period of storage, the capacity at first recharge will be lower. Normal capacity will be restored in two or three charge/discharge cycles. Remember to unplug charger during storage period.

5. If battery does not charge properly:

a. Check for voltage at outlet by plugging in some other electrical device.

b. Check to see if outlet is connected to a light switch which turns power "off" when lights are turned off.

c. Check battery pack terminals for dirt. Clean with cotton swab and alcohol if necessary.

d. If you still do not get proper charging, take or send tool, battery pack and charger to your local Bosch Service Center. See "Tools, Electric" in the Yellow Pages for names and addresses.

**Note:** Use of chargers or battery packs not sold by Bosch may void the warranty.

### DRILLING WOOD OR PLASTIC

If backing block is not used, ease up on the pressure just before the bit breaks through the wood to avoid splintering. Complete the hole from the opposite side immediately after the point breaks through. If bit binds, reverse the drilling operation to help remove the bit from the work.

### DRILLING METAL

Make a center punch in the material for easier starting. Use enough pressure to keep the bit cutting. If the bit is allowed to merely spin in the hole, it will become dull within a short time. When drilling a larger hole, it is faster and easier on your power pack to first make a smaller hole and enlarge it to the

required size. Lubricate the tip of the bit occasionally. **CUTTING OIL** for easier metal drilling. If bit binds, reverse the drilling to help remove the bit from the work.

#### DRILLING MASONRY

Use carbide-tipped masonry bit for cinder block, mortar, common brick, soft stone and

other materials. The amount of pressure to be used is dependent upon the type of material being drilled. Soft materials require less pressure while the hard materials need more pressure to prevent the drill bit from spinning.

### Maintenance

#### Service

**⚠ WARNING NO USER SERVICEABLE PARTS INSIDE.** Preventive maintenance performed by unauthorized personnel may result in misplacing of internal wires and components which could cause serious hazard. We recommend that all tool service be performed by a Bosch Factory Service Center or Authorized Bosch Service Station. **SERVICEMEN:** Disconnect tool and/or charger from power source before servicing.

#### BATTERIES

**Be alert for battery packs that are nearing their end of life.** Battery packs typically last from 500 to 1000 charges. If you notice decreased tool performance or significantly shorter running time between charges then it is time to replace the battery pack. Failure to do so can cause the tool to operate improperly or damage the charger.

**Long term battery storage should be in the discharged state.** Battery packs last longer and re-charge better when they are stored discharged. Remember to fully re-charge battery packs before using after prolonged storage.

#### TOOL LUBRICATION

Your Bosch tool has been properly lubricated and is ready for use. It is recommended that

tools with gears be regreased with a special gear lubricant yearly.

#### D.C. MOTORS

The motor in your tool has been engineered for many hours of dependable service. To maintain peak efficiency of the motor, we recommend it be examined every six months. Only a genuine Bosch replacement motor specially designed for your tool should be used.

#### Cleaning

**⚠ WARNING To avoid accidents, always disconnect the tool and/or charger from the power supply before cleaning.** The tool may be cleaned most effectively with compressed dry air. **Always wear safety goggles when cleaning tools with compressed air.**

Ventilation openings and switch levers must be kept clean and free of foreign matter. Do not attempt to clean by inserting pointed objects through opening.

**⚠ CAUTION Certain cleaning agents and solvents damage plastic parts.** Some of these are: gasoline, carbon tetrachloride, chlorinated cleaning solvents, ammonia and household detergents that contain ammonia.

**⚠ WARNING If an extension cord is necessary, a cord with adequate size conductors that is capable of carrying the current necessary for your tool must be used.** This will prevent excessive voltage drop, loss of power or overheating. Grounded tools must use 3-wire extension cords that have 3-prong plugs and receptacles.

**NOTE:** The smaller the gauge number, the heavier the cord.

#### RECOMMENDED SIZES OF EXTENSION CORDS 120 VOLT ALTERNATING CURRENT TOOLS

Tool's Ampere Rating	Cord Size in A.W.G.				Wire Sizes in mm <sup>2</sup>			
	Cord Length in Feet				Cord Length in Meters			
	25	50	100	150	15	30	60	120
3-6	18	16	16	14	.75	.75	1.5	2.5
6-8	18	16	14	12	.75	1.0	2.5	4.0
8-10	18	16	14	12	.75	1.0	2.5	4.0
10-12	16	16	14	12	1.0	2.5	4.0	—
12-16	14	12	—	—	—	—	—	—

- \* 360° Auxiliary Handle
- \* Depth Gauge
- \* Carrying Case
- \*\* 3-Jaw Chuck
- \*\* Straight Chuck SDS Adaptor

(\* = standard equipment)  
(\*\* = optional accessories)